

IN THE SPECIFICATION

In paragraph 2, please change “probes” to “transducers” as follows:

[0002] A current challenge exists to perform a multidimensional ultrasound scan of a quickly, and more or less rhythmically, moving object within a body, such as a fetal heart. Currently, volume ~~probe~~transducers having a conventional one-dimensional (1D) array, which is mechanically moved in the elevation direction, as well as electronically steered 2D arrays, may be used for the acquisition. This technique makes it possible to acquire pyramid-shaped volume data sets. To image the fetal heart, high frame rate acquisitions are necessary, no matter whether 2D or 3D data sets are being acquired. For acquiring 3D data sets in real-time, one limitation is the constant speed of sound at 1540 m/s; this limits the amount of data to be acquired per second and thus these acquisitions are a tradeoff between frame rate and image quality. To acquire and achieve high frame rates, the line density has to be decreased, which significantly impairs lateral and elevation resolution.

In paragraph 31, please change “transducers” to “an array of elements”; “probe” to “transducer”; and “transducers” to “elements” as follows:

[0031] FIG. 1 illustrates a block diagram of an ultrasound system 100 formed in accordance with an embodiment of the present invention. The ultrasound system 100 includes a transmitter 102 which drives ~~transducers~~ an array of elements 104 within a ~~probe~~transducer 106 to emit pulsed ultrasonic signals into a body. A variety of geometries may be used. The ultrasonic signals are back-scattered from structures in the body, like blood cells or muscular tissue, to produce echoes which return to the ~~transducers~~elements 104. The echoes are received by a receiver 108. The received echoes are passed through a beamformer 110, which performs beamforming and outputs an RF signal. The RF signal then passes through an RF processor 112. Alternatively, the RF processor 112 may include a complex demodulator (not shown) that demodulates the RF signal to form IQ data pairs representative of the echo signals. The RF or IQ signal data may then be routed directly to RF/IQ buffer 114 for temporary storage.

In paragraph 33, please change “probe” to “transducer” as follows:

[0033] FIG. 2 illustrates an ultrasound system formed in accordance with one embodiment of the present invention. The system includes a ~~probe~~transducer 10 connected to

a transmitter 12 and a receiver 14. The ~~probe~~transducer 10 transmits ultrasonic pulses and receives echoes from structures inside of a scanned ultrasound volume 16. Memory 20 stores ultrasound data from the receiver 14 derived from the scanned ultrasound volume 16. The volume 16 may be obtained by various techniques (e.g., 3D scanning, real-time 3D imaging, volume scanning, 2D scanning with transducers having positioning sensors, freehand scanning using a Voxel correlation technique, 2D or matrix array transducers and the like).

In paragraph 38, please change “probe” to “transducer” and “transducers” to “elements” as follows:

[0038] The ~~probe~~transducer 10 is held in one position throughout the acquisition, and is positioned to acquire data representative of the item of interest, such as the fetal heart. The ~~transducer~~elements 104, or array of ~~transducer~~elements 104, are electronically or mechanically focussed to direct ultrasound firings longitudinally to scan along adjacent scan planes, and external position sensing is not necessary.

In paragraph 40, please change “transducers” to “elements” as follows:

[0040] Alternatively, the acquisition sweep may have an acquisition time period covering multiple movement cycles, and the sweep angle 162 may be changed to reflect the type and/or size of anatomy being scanned. An acquisition with a longer acquisition time will acquire more data and the spatial resolution will be better when compared to a scan acquired over a shorter acquisition time. An acquisition with a higher frame rate will result in better temporal resolution than a scan acquired with a lower frame rate. The ~~transducer~~elements 104 are focussed to acquire the adjacent scan planes 18 very close to each other spatially.